

CLAIM AMENDMENTS

1. (Currently Amended) A method of loading material into a dump body of a truck using a loading bucket ~~whose~~ having a volumetric capacity that is approximately 1/4 or more than ~~that a volumetric capacity~~ of the dump body, the dump body having sidewalls and a floor, where the sidewalls are spaced relatively wider than conventional dump bodies of similar volumetric capacity, and the loading bucket having a door at a lower end thereof that when free, swings open and allows the material contained in the loading bucket to drop into the dump body, the method comprising the steps of:

filling the loading bucket with an amount of earthen material;

positioning the loading bucket over the dump body;

lowering the bucket to a position that

- (a) substantially minimizes ~~the a~~ clearance between the floor of the dump body and the swinging door in its freed position so as to minimize splattering of the material dropped as it drops from the bucket into the dump body, thereby reducing the impact force on the dump body caused by the dropping material,
- (b) allows the swinging door to clear the sidewalls of the dump body as it swings through an arc after it is freed, and
- (c) allows the material to be discharged substantially in the center of the dump body so as to produce a more balanced load on the dump body; and

freeing the swinging door so as to open the bucket and allow the material held in the bucket to drop into the dump body, whereby the door swings open and clears both the sidewalls and the floor of the dump body while minimizing the height from which the material is dropped from the bucket, which is unlike the conventional dump bodies wherein the swinging door either collides with one of the sidewalls of the conventional dump body, drops the material from the bucket substantially off the center of the body or drops the material from a substantially greater height.

2. (Currently Amended) A body of a vehicle for hauling material, the body made by the following process:

- (a) determining ~~the desired load distribution of weight~~ a desired location for a load center of gravity on a chassis of the ~~haulage~~ vehicle;
- (b) determining ~~the a~~ desired volumetric capacity for the body;
- (c) establishing ~~a~~ an initial line for a floor, ~~a~~ an initial line for a front wall of the body and an initial inside body width;

(d) developing a three dimensional volumetric model of ~~the hauled material~~ a load to be carried in the body on the chassis defined by the initial floor line, the initial front wall line and the initial inside body width, including developing a three-dimensional volumetric load model that includes modeling corner voids of the hauled material, using data collected from an anticipated point of use with the three dimensional volumetric model of the hauled material having a volume and a volumetric model center of gravity located ~~distribution of weight~~ on the chassis;

(e) adjusting a set of design parameters of the body until the ~~three dimensional model distribution of weight on the chassis is substantially similar to the desired distribution of weight~~ load model center of gravity is located proximate the desired location for the load center of gravity on the chassis and the ~~volumetric capacity of the body~~ volume of the three dimensional volumetric model is substantially similar to the desired volumetric capacity, including curving a rear edge of the floor to correspond with rear corner voids in the three-dimensional volumetric model; and

(f) producing the body in accordance with the set of design parameters.

3. (New) A body of a haulage vehicle made by a process comprising:

(a) modeling a shape of a load of heaped material in three dimensions, where the shape of the load of heaped material is substantially conical;

(b) modeling a body to hold the substantially conically shaped load of heaped material, where a shape of the body is determined by predetermined parameters including a rear edge of a floor of the body that is curved to correspond with the conical shape of the load of heaped material; and

(c) producing the body according to values of the predetermined parameters resulting from modeling of the body.

4. (New) The body of claim 3 where the predetermined parameters include one or more of (1) a position of the body's floor, (2) a position of the body's sidewalls (3) a length of the floor, (4) a height of sidewalls, (5) a distance between the respective sidewalls and (6) a position of the body front wall.

5. (New) The body of claim 3 including adjusting the predetermined parameters to locate a location for a center of gravity of material held in the modeled body that approximates a lowest possible position for the center of gravity.

In re Appln. of Hagenbuch et al.
Application No. 09/593,647

6. (New) The body of claim 3 further including adjusting the predetermined parameters to allow material to be dropped into the modeled body from a lowest practical vertical elevation over a floor of the body.